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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter of:

Telephone Number Portability

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CC Docket No. 95-116

FURTHER COMMENTS OF PACIFIC BELL

Pacific Bell, by its attorneys, respectfully submits this pleading in response to the Commission's request for further comments on "how passage of the Telecommunications Act of 1996 may affect the issues raised in the July Notice of Proposed Rulemaking."¹ As discussed below, the 1996 Act affirms the Commission's tentative conclusion that it should exercise a leadership role in developing a national number portability policy. Pacific Bell urges the Commission to discharge this responsibility by specifying the type of routing information to be deployed on ported calls (the "location routing number") and establishing service quality standards (regarding, e.g., post-dial delay) and not to dictate a specific technology applicable to mechanisms for obtaining this information.² To encourage innovation, allow for evolution, and avoid the pitfalls of mandating a single technology that will be inflexible or unduly expensive, the Commission should permit carriers to choose the most efficient trigger mechanism that utilizes the common routing information and complies with the standards.

¹ DA 96-358, released March 14, 1996, *citing* Telephone Number Portability, FCC 95-284 (released July 13, 1995) ("NPRM").

² As the California PUC has recognized, regulators "should not dictate specific technologies to deliver advanced telecommunications . . . [t]he astounding rate, vast scope and unpredictable nature of technological innovation strongly suggest that any public strategy which is preoccupied with direct technology planning faces a high probability of failure." Enhancing California's Competitive Strength: A Strategy for Telecommunications Infrastructure (November 1993), at 25, 26.

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I. INTRODUCTION

Pacific Bell has participated actively in this docket, urging the Commission to provide guidance regarding the appropriate elements and goals of long-term local number portability.

To that end, we explained that:

It is not necessary to have just one, uniform technical solution nationwide so long as various solutions are interoperable. The FCC can help tremendously in this respect by establishing a set of guidelines that lay out the common functions and features necessary for portability.³

In our comments, we advocated adoption of a "release-to-pivot" ("RTP") approach to long-term number portability. As explained below, however, we have since refined our position as a result of co-chairing the California Local Number Portability Task Force ("Task Force"). We now view RTP as just one of several alternative, interoperable trigger mechanisms.

The details of the Task Force's work, and of our "Carrier Choice" proposal, are important because they bear directly on the Commission's new statutory obligations to assure that the approach to long-term number portability is technically feasible and that related costs are recovered in a competitively neutral manner. The Task Force was convened in May 1995 to "evaluate, recommend, and, ultimately, implement a technically feasible and economically feasible solution for service provider number portability that meets the needs of

³ Comments of The Pacific Companies, filed Sept. 12, 1995, at 12 ("Pacific Opening Comments").

California consumers and carriers in a competitively neutral manner."⁴ On February 29, the Task Force released a Report containing two alternative recommendations. Both alternatives are based on transmission of a common routing address known as the location routing number -- a number associated with each ported number in network routing data bases, which uniquely identifies the end office switch serving the called party.⁵

The first alternative, known as AT&T's Location Routing Number ("LRN"), involves an external data base query by the originating switch for every inter-switch telephone call, whether or not the called number has been ported.⁶ The query is initiated by an AIN/IN or equivalent TCAP-based trigger.⁷ The second alternative, which Pacific calls "Carrier Choice," allows each carrier to select the trigger mechanism that is most efficient given its network architecture and signalling and switching technology.⁸

Carrier Choice permits each carrier to select which triggering mechanism is optimal for its network, as long as interconnection standards are met. One alternative mechanism,

⁴ California Local Number Portability Task Force Report, Feb. 29, 1996, at 3 ("Task Force Report").

⁵ Task Force Report at 5.

⁶ This alternative was supported by AT&T and AT&T Wireless, AirTouch, the California Cable Television Association, Citizens Telecom, Cox Enterprises, ELI, Falcon, MFS, MCI and MCImetro, TCG, and Time Warner.

⁷ *Id.* at 44. The "trigger" alerts the network that the call may be to a ported line number and a database must therefore be queried.

⁸ The proponents of Alternative 2 were Contel, Contel Cellular, California Department of Consumer Affairs, Division of Ratepayer Advocates, GTE California, GTE Mobilnet, Pacific Bell, Pacific Bell Mobile Services, and Roseville Telephone Company.

which many LECs now believe holds considerable promise, is known as Query on Release. Indeed, because of concern with the high cost and technical ramifications of AT&T's LRN, most of the RBOCs and large independent telephone companies in the U.S. and Canada recently sent a joint letter to four major manufacturers of telecommunications equipment, asking for pricing and implementation information concerning Query on Release.⁹ This inquiry both demonstrates a good faith effort to reduce the industry-wide costs of long-term number portability (by significantly reducing the number of necessary queries) and belies any notion that acceptance of AT&T's LRN by the industry is a "done deal."

Prior to contacting a routing data base, the Query on Release trigger attempts to complete a call to the switch where the NPA-NXX of the dialed number resides. If the number is served by the incumbent switch, the call is completed as it is today. If the number is ported, the call is released back to a previous switch in the call path, which performs a query to determine the location routing number of the new serving switch. The call is then routed to the serving switch.¹⁰ Importantly, as long as all carriers use common routing information (the location routing number), then the optional LRN and Query on Release alternatives are interoperable, and portability will be transparent to the end user.

⁹ See Attachment 1 hereto.

¹⁰ Query on Release is similar to Release to Pivot in that queries are performed only on calls to ported numbers. This greatly reduces the volume of queries and hence the cost required for providing long-term number portability. Query on Release differs from RTP, however, in that the switch that redirects the call also performs the query. This eliminates a major concern expressed by some parties about RTP -- that routing of all calls is controlled by the incumbent carrier.

II. THE COMMISSION SHOULD DISCHARGE ITS STATUTORY OBLIGATIONS BY SPECIFYING THE ROUTING INFORMATION AND SERVICE STANDARDS, BUT PERMITTING CARRIERS TO CHOOSE THE TRIGGER MECHANISM.

The new Act defines number portability as "the ability of users of telecommunications services to retain, at the same location, existing telecommunications numbers without impairment of quality, reliability, or convenience when switching from one telecommunications carrier to another."¹¹ It imposes a duty on all local exchange carriers to "provide, to the extent technically feasible, number portability in accordance with requirements prescribed by the Commission."¹² In addition, the Commission is required to assure that the costs of number portability are "borne by all telecommunications carriers on a competitively neutral basis"¹³ Finally, one of the "competitive checklist" conditions to be satisfied by BOC requests for interLATA authority is that, until long-term number portability is technically feasible, interim number portability must be provided "through remote call forwarding, direct inward dialing trunks, or other comparable arrangements, with as little impairment of functioning, quality, reliability, and convenience as possible."¹⁴

Pacific Bell respectfully submits that the new statutory framework affects the instant proceeding in five important respects:

¹¹ Section 3(a)(46).

¹² Section 251(b)(4).

¹³ Section 251(e)(2).

¹⁴ Section 271(c)(2)(B)(xi).

First, it confirms that the Commission is responsible for developing a national number portability policy and determining when long-term number portability is technically feasible.¹⁵ Notably, though, the Act does not preclude adoption by the Commission of guidelines or of a menu of acceptable long-term approaches that do not "impair quality, reliability, or convenience."

Second, it expresses Congress's clear judgment that (a) remote call forwarding (RCF) and direct inward dialing (DID) are acceptable interim number portability alternatives for purposes of satisfying the competitive checklist, and (b) BOC entry into the interLATA market cannot be delayed by the Commission pending implementation of a long-term number portability solution. Accordingly, the Commission need not further consider whether RCF and DID are appropriate interim measures.¹⁶

Third, it properly defines number portability as service provider portability. As Pacific Bell explained in our comments in this proceeding, location and service portability are not competitively significant in the same manner as service provider portability, and raise additional and highly complex technical issues.¹⁷ Consequently, the Commission at this time

¹⁵ See NPRM at ¶¶ 7 (tentatively concluding that the Commission should assume a leadership role in developing a national number portability policy), 19 (requesting comment on feasibility, limitations, and costs of long-term number portability solutions).

¹⁶ California already requires interim number portability through remote call forwarding. CPUC D. 95-07-54, at 35-36, App. A at 10 (July 24, 1995) (Rule 6). Pacific currently provides interim number portability to MFS under a RCF approach known as Directory Number Call Forwarding, and has an interim number portability tariff pending.

¹⁷ Pacific Opening Comments at 11-12.

should adopt rules to address only service provider portability, although it may wish to require that any long-term approach to service provider portability not preclude eventual implementation of service and location portability, if demanded by the marketplace.¹⁸

Fourth, it explicitly commands that the costs of implementing number portability be borne by all carriers on a competitively neutral basis.¹⁹ This requirement implicitly recognizes that long-term number portability methods that impose massive financial burdens on particular classes of carriers are not competitively neutral. AT&T's LRN proposal, if mandated for all carriers, would be one such method. Because LRN requires an external data base query on every inter-switch call -- even though such a query likely will be unnecessary for the majority of calls -- it would require tremendous expenditures by incumbent carriers such as Pacific Bell. To handle the volume of queries that would be required by LRN, Pacific Bell alone would have to deploy 15 or more Service Control Point (SCP) pairs in California, augment its SS7 network, and make substantial changes to switch hardware and software, at a cost of approximately \$ 1 billion over a three year period. For this reason, Pacific's proposed alternative, not AT&T's, was endorsed by the California Division of Ratepayer Advocates and Department of Consumer Affairs.

Under Pacific's alternative, each carrier would be free to choose whether to implement LRN, Query on Release, or some other trigger mechanism. New entrants,

¹⁸ The Query on Release approach to long-term service provider portability can support both location and service portability, since any call can be released back and routed through a non-incumbent provider's network.

¹⁹ See Reply Comments of Pacific Bell and Nevada Bell, filed Oct. 12, 1996, at 9.

building networks from scratch, might find AT&T's LRN to be financially reasonable.²⁰

Incumbents, with large in-place networks handling billions of calls, could implement another approach as long as common routing information is used by all carriers. Cost recovery under Pacific's alternative is more likely to be competitively equitable -- and therefore more consistent with Section 251(e)(2) -- because the total costs of number portability will be lower than under a universal, rigid LRN mandate, and no industry segment will be disproportionately burdened.

Fifth, and most important, the new Act requires that any long-term number portability approach be technically feasible. At this point, neither LRN, Query on Release, RTP, or any other long-term trigger mechanism is technically feasible; all would require substantial software development and testing. Importantly, though, allowing carriers to choose the method that works best in their networks will not delay number portability. Vendors are still in the preliminary stages of writing requirements for the needed software. There is no reason to believe these efforts will be slowed by concurrently pursuing alternate technologies. Indeed, as the Task Force Report notes,²¹ there are numerous additional implementation issues -- accommodating non-participating networks, modifying operational support and billing systems, rationalizing interaction of operator service systems and number identification systems, and developing any needed data base and associated service

²⁰ Future entrants might develop additional, innovative approaches, as long as the Commission's policies preserve flexibility and avoid specifying a rigid design.

²¹ Task Force Report at Section 5.

management systems -- that likely will take more time to resolve than the development of switch software.

To assure that carriers select systems that comport with the Act's requirement that quality not be impaired, the Commission should require that any method comply with standards regarding post-dial delay and any other relevant criteria.²² Pacific is confident that Query on Release will readily comply with such standards.²³ In any event, the Act cannot be read to require exact equality regardless of cost; the Commission should therefore specify quality standards and allow individual carriers to select compliant implementation mechanisms.²⁴

With respect to reliability, both LRN and Query on Release are likely to be extremely stable and dependable. Nonetheless, mechanisms such as Query on Release, which utilize look-ups only on calls to ported numbers, may enjoy some reliability advantage. Failure of the portability data base in a LRN environment, while highly unlikely, could impair or prevent processing of all calls (ported or not) traversing switches controlled by the affected

²² *Compare* Provision of Access for 800 Service, 6 FCC Rcd 5421 (1991) (establishing post-dial delay standards for the 800 data base system).

²³ To date, there has been no independent testing of post-dial delay for either LRN or Query on Release.

²⁴ Pacific notes that this approach complies with AT&T's own views, as expressed in the Commission's E911 Compatibility docket: "the Commission's rules must provide sufficient flexibility to foster development of alternative approaches and must not unduly burden manufacturers and operators of MLTS equipment The proper role for the Commission is to mandate the end result: outpulsing [calling information] from dispersed systems. The marketplace, rather than the Commission, can best decide the acceptability of different approaches to achieving this result. . . ." AT&T Comments, CC Docket No. 94-102, filed Jan. 9, 1995, at 7, 8.

SCPs. In a Query on Release environment, in contrast, such a failure would affect only ported calls.

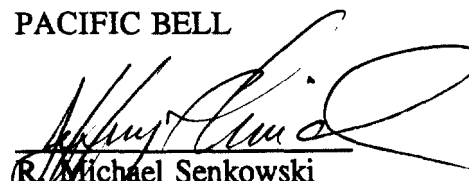
III. CONCLUSION

The Telecommunications Act of 1996 directs the Commission to adopt rules governing long-term service provider portability. The Commission should discharge its responsibility by specifying that routing information should consist of the "location routing number," as agreed to by the California Local Number Portability Task Force and other states, setting standards for post-dial delay and any other relevant criteria, and within this broad framework, allowing carriers to choose the trigger mechanism best suited to their networks. This approach will provide guidance, encourage innovation, and avoid the pitfalls of mandating AT&T's LRN or any other specific technical solution. Finally, the Commission should recognize that the Act permits the use of RCF or DID as interim number portability measures and prohibits delaying BOC entry into the interLATA market until after implementation of long-term number portability.

Respectfully submitted,

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March 29, 1996

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